

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1 - 2 (canceled)

Claim 3 (currently amended): ~~Apparatus as defined in claim 2,~~ Ultrasonic bone testing apparatus comprising a pair of ultrasonic transducers each of which comprises a piezoelectric copolymer transducer; mounting structure supporting the transducers in facing spaced relation to each other, so as to be respectively positionable on opposite sides of and both coupled ultrasonically to an animal portion containing a bone, for respectively transmitting ultrasonic energy through and receiving ultrasonic energy transmitted through said animal portion including the bone; and electrical circuitry connected to the transducers to energize one transducer to transmit ultrasonic energy and to detect an electrical signal generated by the other transducer in response to received ultrasonic energy, wherein the mounting structure includes a support for positioning the animal portion between the transducers, and a device for coupling the transducers ultrasonically to the animal portion; and wherein each of the transducers comprises a copolymer disk having a periphery and two opposed major surfaces, one of which is disposed to face the bone-containing animal portion, and further includes rigid support structure engaging the other major surface of the disk inwardly of the periphery thereof for supporting the disk against pressure exerted on the first-mentioned major surface of the disk.

Claim 4 (canceled)

Claim 5 (currently amended): ~~Apparatus as defined in claim~~
~~4,~~ Ultrasonic bone testing apparatus comprising a pair of
ultrasonic transducers each of which comprises a piezoelectric
copolymer transducer; mounting structure supporting the transduc-
ers in facing spaced relation to each other, so as to be respec-
tively positionable on opposite sides of and both coupled
ultrasonically to an animal portion containing a bone, for
respectively transmitting ultrasonic energy through and receiving
ultrasonic energy transmitted through said animal portion
including the bone; and electrical circuitry connected to the
transducers to energize one transducer to transmit ultrasonic
energy and to detect an electrical signal generated by the other
transducer in response to received ultrasonic energy, wherein the
mounting structure includes a support for positioning the animal
portion between the transducers, and a device for coupling the
transducers ultrasonically to the animal portion; wherein said
coupling device comprises a pair of pads, respectively disposed in
contact with said transducers, and respectively engageable with
opposed surface regions of an animal portion positioned in said
support as aforesaid; and wherein each of said transducers
comprises a copolymer disk having a periphery and opposed major
surfaces, one of which is in contact with one of said pads, and
further includes rigid support structure engaging the other major
surface of the disk inwardly of the periphery thereof for
supporting the disk against pressure exerted on the disk through
the last-mentioned pad.

Claims 6 - 11 (canceled)

Claim 12 (currently amended): A method ~~according to claim~~
~~11,~~ of determining a characteristic of a bone in a bone-containing
portion of an animal comprising disposing a pair of ultrasonic

transducers each of which comprises a piezoelectric copolymer transducer respectively on opposite sides of, and ultrasonically coupling both transducers to, a bone-containing animal portion; electrically energizing one transducer to transmit ultrasonic energy through the animal portion including the bone, such that the transmitted ultrasonic energy is received and converted to an electrical signal by the other transducer; detecting the electrical signal; and using the detected signal to derive a value representative of the bone characteristic to be determined; wherein each of the transducers is a disk of piezoelectric copolymer; and wherein each transducer disk has a periphery and opposed major surfaces, one of which is oriented to face the animal portion, and further including supporting the other major surface of each disk by disposing, in contact therewith, rigid support structure spaced inwardly from the disk periphery.

Claims 13 - 28 (canceled)